

July-'46

INTERNATIONAL CITY MANAGERS' ASSOCIATION
1313 EAST 60TH STREET - CHICAGO 37, ILLINOIS

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STREET NAME SIGNS

What types of street name signs are most widely used and what is the best type now available?

Street name signs in most cities are made of porcelain or baked enamel steel plate or aluminum plate. Wooden signs, however, are used in quite a number of cities, and have some important advantages over metal signs. The city of Milwaukee is now conducting some experiments on signs made of plastic materials and aluminum, while Denver is installing a new type of metal sign.

The street name signs installed in Milwaukee about 16 years ago probably are typical of the signs found in many cities. They are made of porcelain enamel steel and carry the name of the cross street in small letters at the top. These signs cost 57 cents each in 1930, and were mounted on oak boards impregnated with preservative oil and fastened to brackets made of malleable galvanized castings which are fastened to street light poles. While the signs are still in place and giving good service, some of them faded after a number of years and it was necessary to remove them to apply varnish to bring out the color. Recently, Milwaukee has been consulting with manufacturers of plastics and aluminum products with a view to developing a new sign.

The city of Denver, Colorado, after experimenting with concrete, steel, and wooden posts with various types of signs, recently decided that the conventional signs are too high off the ground and require the automobile driver to take his eyes off of the pavement, and also that they are too expensive. City officials believed that street name signs should be low enough to be picked up by automobile headlights at night. The city therefore has adopted a vertical-type sign with letters in the street name placed one below the other on two sides of a three-sided tube made from 16-gauge sheet metal which is bent to form a triangle with three equal sides, each side 4" by 32". This tube is dipped in a primer vat and then "shot" with two coats of black enamel. Process letters are applied by means of a screen stencil system and while the paint is still wet small glass beads are dusted on the letters to provide a reflecting effect. When the lettering is dry the entire sign is sprayed with clear varnish. The post that supports the sign is 1½-inch standard wrought iron pipe 7" long with an aluminum coating. The post is set in concrete and the triangular sign slipped over the post and secured by two bolts. Complete cost of labor, material, and installation of sign is \$4.73 per sign.

In 1937 the School of Forestry at Yale University recommended that the city of New Haven replace metal signs with wood signs in order to develop a more visible sign which also could be repainted at minimum cost. During the past two or three years the city of New Haven has installed more than 500 of these wooden signs. They have a black background and white raised letters. City officials report that these wooden signs have greater visibility but are more expensive than other types of signs. New Haven also reports that brush painting is preferred to roller painting of the white letters because experience shows that paint applied with a roller peels easily. Wood signs also are

(OVER)

recommended by the Michigan Municipal League and are now standard in 21 Michigan cities including Ann Arbor, Benton Harbor, Detroit, Ferndale, Flint, Jackson, Monroe, Plymouth, and Saginaw. A number of cities in other states have installed this sign, including Davenport, Iowa, and Houlton, Maine.

Selection of Signs. Perhaps the most extensive tests of street name signs that have been undertaken in recent years were those made in Saginaw, Michigan, in 1937 when the city received bids on 11 different samples. Four of the signs were of aluminum plate or alloy, two were "metal," four were 18-gauge galvanized steel, and one was gumwood. The height of the letters varied from 2-1/2 to 3-7/8 inches, the highest letters being on the gumwood sign. Five of the signs used the colors black and white, and the remaining six used various combinations such as green and white, black and yellow, black and silver, and green and silver.

All of these signs were tested for visibility, durability, construction, and cost. With regard to visibility, which is a prime consideration in the purchase of signs, the white letters on black background on the gumwood signs were visible for 259 feet. Next in visibility were the black letters on the silver background on an aluminum sign, which were visible for about 165 feet. Letters on other signs were not visible beyond 147 feet, with one sign visible at only 87 feet.

In testing durability the signs are placed at a distance of approximately ten feet, and half of a brick hurled at them. The signs were then checked for breaking, bending, and chipping. While some of the metal signs showed no chipping on the surface, the bending of the signs would eventually make them unsightly and they would from necessity need replacing. Metal signs which were chipped would eventually rust out. Consideration also was given at this point to the material in the sign. In this test the aluminum alloy (cast) sign won first place, with the gumwood sign in second place.

In testing construction the factors considered were: appearance of the sign, method of installation, and ease of maintenance in future years. In this particular observation it was a case of personal judgment. The aluminum plate signs rated highest and the gumwood sign was in fifth place.

The rating on the basis of price gave the gumwood sign fifth place, while the steel signs were cheaper.

When all of the above factors were considered and combined for a final rating, the gumwood sign received the best score. The observations and tests indicated that the gumwood sign was the best all-around sign because:

1. The sign can be observed at 259 feet whereas the next best sign can be seen at a distance of only 165 feet,
2. Its cost is reasonable.
3. Its durability is outranked by only one sign, and this sample was eliminated because of its extremely high cost.
4. Its construction features, while not so pleasing in appearance, are substantial, and can be easily maintained at small cost.

5. The wooden sign and the letter height and stroke conform very closely to the conclusions reached after a number of experiments conducted by the city of Boston in 1927, and with recommendations made in 1937 by the School of Forestry of Yale University to the City of New Haven, Connecticut.

Advantages of Wooden Signs. Perhaps the best type of wooden sign developed to date is the carved wood street name sign designed by the Michigan Municipal League over 10 years ago. The name plates are of heavy gumwood stock and have large raised letters painted white, with the remainder of the board painted black. Chief among the advantages of this sign is its great legibility both in daylight and in artificial light, and its extreme durability. Legibility results from the following factors: (1) the white-on-black combination; (2) the large size of the letters, (3-3/4 inches high); (3) the letters are raised; (4) the sign lengths are adjusted to the length of the name instead of squeezing long names into a standard length sign; and (5) wooden signs are extremely durable.

Wooden signs will not chip when hit by rocks or vehicles, nor will they bend or rust. Any metal sign is subject to all of these damaging factors, and once rust sets in, a metal sign ordinarily must be replaced as it cannot satisfactorily be repaired. The wooden signs, on the other hand, are easily maintained by an occasional paint job. The city of Detroit has some carved wooden signs, substantially the same as these gumwood signs, which have been in use for over 25 years. These gumwood signs are available from the Michigan Municipal League (205 South State Street, Ann Arbor, Michigan) at \$5 per sign (subject to change). A sign includes four name boards for a standard two-street intersection, complete with fitting assembly, ready for mounting on a 2-inch water pipe post (the post is not included in the price). The League makes a sample sign available without cost upon request of the officials of any city.

Location of Signs. It is exceptional to find signs on all four corners at street intersections, except in the case of very wide streets, or on boulevards, or in business sections. Most cities place signs only on one corner in residential districts, on two diagonally opposite corners on more heavily traveled streets or through streets, and on four corners in the business district. In downtown districts the signs usually are placed on light posts or on other utility posts such as trolley poles.

Where signs are placed on only two corners the sign should be placed at the intersection nearest the approaching traffic on the main artery, so that it may be seen at a maximum distance by approaching traffic on the busier of the two streets. Since traffic on the cross street must slow down or stop at the intersection, the distance that the sign can be seen is less important.

Street name signs should be readily visible far enough from the intersection so that the motorist may prepare to turn before he is at the intersection. Signs which are placed at right angles, one above the other, can be more readily seen than signs which are placed end to end at right angles on the same level because in the case of the former a person can see both signs at once, but when they are end to end the view of one sign is obstructed by the other.

The height at which signs are hung vary from about 8 or 10 feet up to 15 or more feet. On boulevards and other streets carrying heavy traffic, the sign probably should be visible for 200 feet, and this may require that the sign be hung about 14 or 15 feet above the street.

(OVER)

Conclusion. The weight of evidence seems to favor the use of wood over metal as the best material for street signs. Metal signs may be attractive in appearance, but they are inferior in durability to properly painted wood, and the glare on the metal surface greatly reduces its visibility under comparable conditions of light. Wooden signs also are more easily serviced than metal signs. The raised letters make the sign visible from several angles and make it possible to repaint quickly with a roller. Thus the original cost of the metal sign may be less than the wood sign, but the wood sign should last longer and cost less to maintain. It is possible that further experimentation may result in the development of an aluminum sign or one made from plastic or ceramic materials that will be preferable to both the wood and metal signs.